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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/059,913	01/28/2002	John George Maneatis	TCU 325	1601

7590 09/24/2003

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EXAMINER

SHINGLETON, MICHAEL B

ART UNIT PAPER NUMBER

2817

DATE MAILED: 09/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

W-059,913

Applicant(s)

Mahester

Examiner

SHILWALTER

Group Art Unit

2817

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE Three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- ☒ Responsive to communication(s) filed on 7-2-2003
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-68 is/are pending in the application.
- Of the above claim(s) 29, 62, 63 is/are withdrawn from consideration.
- ☐ Claim(s) is/are allowed.
- ☒ Claim(s) 1-6, 35-47, 64-68 is/are rejected.
- ☒ Claim(s) 7-28, 30-34, 48-61 is/are objected to.
- ☐ Claim(s) are subject to restriction or election requirement

## Application Papers

- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some\* ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_
- ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 248
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other \_\_\_\_\_

Office Action Summary

**DETAILED ACTION**

Applicant's election without traverse of Species IV in Paper No. 7 is acknowledged.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 39-41, 44, 45, and 66 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Mar 6,114,914 of record (Mar).

Mar discloses Phase locked loop arrangement in Figures 4 and 5 that includes a phase locked loop method and the corresponding structure. The phase detector performs the error detector, the VCO 106 has a plurality of outputs that meets the claim limitations of providing a plurality of phase-shifted feedback output signals based on the primary output signal (Note that Figures 8 and 9 was elected and applicant believes that this embodiment shows this feature. The only plurality of phase shifted signals are the ones from the VCO and thus the above reasoning applies. Also note that the phase shifted signals are considered to be phase-rotated.). The configuring of the VCO such that the primary output signal tends toward a predefined frequency relationship with the reference signal is inherently part of the phase locked loop structure of Mar. This is mainly the result of the error detector. The feedback signal is obtained from the plurality of output signal of the VCO as is clearly seen in Figure 5 of Mar. Figure 6 of Mar

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shows the phase-shifted nature of the plurality of outputs compared to the primary output. Figure 6 also shows the generally regular fixed relationship of these signals.

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 5, 35-38, 46, 47, 64, and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mar 6,114,914 (Mar).

Mar does not show the "regular spaced" fixed phase relationships and the specific ones mentioned in the claims. However, this is merely the selection of the workable or optimum range and as this involves but routine skill in the art the selection of these values would have been obvious to one of ordinary skill in the art at the time the invention was made. Also Mar does not show a divider in the feedback path and/or reference path. This is conventionally known so as to allow the range of frequencies to be controlled to greater than one that did not employ a divider.

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a divider in the feedback path or the reference path so as to allow the phase locked loop to produce a greater ranges of controlled frequencies dependent on the selected divider ratio as is well known in the art.

Claims 42, 43, 67 and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanimoto 6,320,435 of record (Tanimoto) .

Figure 5 of Tanimoto discloses a phase locked loop and phase locked loop method having the error detector 10, the current controlled oscillator 14, the two charge pumps. Canceling the pulse to

compensate for the correcting pulse is seen as a very broad limitation and since the pulse from the second charge pump 118 affect the pulse of the first charge pump in an indirect manner Tanimoto is seen as meeting these claim limitations. Tanimoto utilizes a current controlled oscillator rather than a voltage controlled oscillator. However, these are art recognized equivalents in the art and accordingly it would have been obvious to replace the voltage to current converters and the associated current controlled converter with a voltage controller oscillator as these are art recognized equivalents known in the art at the time the invention was made.

Claims 6-28, 30-34 and 48-61 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael B. Shingleton whose telephone number is 703-308-4903. The examiner can normally be reached on Monday-Thursday from 8:00 to 4:30. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal, can be reached on (703) 308-4909. The fax phone number for the organization where this application or proceeding is assigned is 703-308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

MBS  
Sept 17, 2003

*Michael B. Shingleton*  
MICHAEL B. SHINGLETON  
EXAMINER  
SEP 17 2003